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The antecedents and consequence of financial well-being: a survey of parliamentarians in Ghana

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Abstract

Purpose – This paper examines the effect of financial self-efficacy and financial behaviour on financial well-being and ascertains whether financial well-being affects an individual's level of happiness in life. The authors also show the mediating role of financial behaviour in the relationship between self-efficacy and financial well-being.

Design/methodology/approach – The survey method of research was adopted using questionnaires as the principal means of data collection. The hypotheses of the study were tested on a rich data set from a sample of 210 parliamentarians in Ghana using the structural equation modelling technique.

Findings – The results show that individuals with high level of financial self-efficacy practise responsible financial behaviour and find financial behaviour to be a good predictor of financial well-being. The authors also find financial behaviour to mediate between financial self-efficacy and financial well-being and conclude that well-being impacts positively on happiness.

Practical implications – Findings of this study demonstrate that the financial well-being of an individual has important implications on the quality of life and an important way of improving well-being is to promote responsible financial behaviour.

Originality/value – This study employs the subjective measure of financial well-being in its analysis and also examines an outcome of financial well-being.

Keywords Happiness, Financial behaviour, Financial well-being, Financial self-efficacy

Paper type Research paper

Introduction

Standard economic studies have done extensive work on economic growth and economic development at the macro level using aggregate data. Economists generally measure a country's wealth in terms of its gross domestic product per capita (GDP per capita) and the general view is that countries with higher GDP per capita are considered to have higher standards of living and vice versa. On the basis of GDP per capita, countries have been classified into high income, upper-middle income, lower-middle income and lower-income economy (World Bank, 2017). While the use of GDP presents an objective way of measuring the wealth of a country, concerns have been raised over the years about its effectiveness in capturing the true welfare of citizens. For instance, notwithstanding the fact that GDP provides a useful indication about the size of an economy, it fails to directly account for the social and economic progress of citizens Diacon, 2016; Răileanu-Szeles, 2014).

On the surface, a country could be doing so well by reference to its GDP per capita, but this might not necessarily translate to better living standards of its people. Emerging studies (Brüggen *et al.*, 2017) have therefore emphasized the need for researchers to go beyond standard macro-level indicators in examining the living standards and well-being of citizens. This in part has been sparked by the growing financial concerns and well-being of

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individuals across the globe. Consequently, research on financial well-being has received significant attention in recent times.

Despite the surge in research interest on financial well-being, existing studies have mostly employed the objective measure of financial well-being (Gutter and Copur, 2011; Xiao *et al.*, 2009) which has been criticized for being too narrow in measuring an individual's true financial condition. While the reasons for this trend are not immediately known in literature, the lack of research focus on the subjective measure of financial well-being appears curious given that most studies generally concur that financial well-being is inherently subjective (Arber *et al.*, 2014; Campara *et al.*, 2017; Gutter and Copur, 2011; Lyubomirsky *et al.*, 2005; Strömbäck *et al.*, 2017).

Again, existing studies on financial well-being have overly concentrated on the determinants of financial well-being rather than the outcome (Farrell *et al.*, 2016; Răileanu-Szeles, 2014; Vlaev and Elliott, 2013). While not discounting the relevance of these studies, Brüggen *et al.* (2017) recommend an extension of the existing framework on financial well-being to include the consequence thereof. Interestingly, most of the existing studies on financial well-being have also been restrictive and particularly skewed towards developed economies. This study addresses these gaps in literature by examining the effect of financial self-efficacy (FSE) and financial behaviour on financial well-being. In particular, the study explores the different dimensions of financial behaviour and their effect on financial well-being. It further ascertains the relationship between financial well-being and an individual's level of happiness in life using elected members of Ghana's parliament as our target respondents.

We focussed on parliamentarians for two important reasons. First, existing studies on well-being (Kim *et al.*, 2003; Xiao *et al.*, 2009) strongly posit that a homogeneous group is needed to permit proper assessment of the well-being of individuals. Delle Fave *et al.* (2011), for instance, point out that well-being is influenced by specific circumstances such as economic characteristics and needs associated with particular life stages and hence, using a relatively homogeneous group affords the researcher the opportunity to minimize the occurrence of distortions in analysis usually associated with a more diversified sample.

Second, it has been argued that an individual needs to attain some threshold of earnings in order to be able to cater for current needs and future commitment as well. To the extent that an individual who is financially well should have control over both present and future financial commitment, earning capacity of an individual is critical in assessing financial well-being (Hamilton and Darity, 2017). Parliamentarians in Ghana fall within the category of Ghanaians whose average annual consumption expenditure exceeds that which has been classified as the wealthiest (GHS 7,243.70, the equivalent of $1,610) by the Ghana Poverty and Inequality Report 2016 (Cooke *et al.*, 2016).

Results of this study based on our structural model analysis suggest that a positive and highly significant relationship exists between financial behaviour and financial well-being. This is an indication that a responsible financial behaviour has important implications on an individual's level of financial well-being. We also find FSE to be a good predictor of financial behaviour while financial well-being was found to be positively associated with a sense of happiness in life. Taken together, these findings suggest that individuals who are financially knowledgeable, confident and can exercise self-control (FSE) are more likely to practise responsible financial behaviour which is critical in becoming financially well in life. Also, individuals who are financially well are more likely to be happy in life and free from worries.

The rest of the paper is structured as follows: the next section reviews the literature on financial well-being and the determinants and consequences of financial well-being. This is followed by a description of the data and the model used to estimate the proposed relationships. The key findings are then presented followed by concluding remarks.

Literature review

The concept of well-being and financial well-being

The term well-being is a broad concept that has been applied in different situations to serve a variety of purposes in different disciplines. Predominantly, well-being has been used in psychology and economic research to mean the ability to fulfil goals; being free of depression, anxiety, pessimism; overall satisfaction among others (Arber *et al.*, 2014; Diener and Biswas-Diener, 2002; Shams, 2016; Xiao, 2008; Zemtsov and Osipova, 2016).

Praag, Frijters and Ferrer-i-carbonell (2003) however conceptualized well-being as an individual's satisfaction in six different areas: business, finance, home, leisure, health and environment. While the different dimensions of well-being have been found to be closely related and interconnected, the financial dimension is generally believed to be central to the well-being discourse (Zemtsov and Osipova, 2016). Consequently, studies on well-being have mostly focussed on the financial dimension (Brüggen *et al.*, 2017; Dodge *et al.*, 2012).

As a concept, studies in the past have considered financial well-being as the absence of financial distress (Neill *et al.*, 2006). Within this context, an individual who is financially well should be capable of providing for his needs and the means to settle any indebtedness when they fall due. Recent studies, however, argue that financial well-being should be viewed in terms of an individual's capacity to meet both current and future financial commitments (Farrell *et al.*, 2016; Zemtsov and Osipova, 2016). In line with this belief, the Consumer Financial Protection Bureau (2015) defines financial well-being to mean "a state of being in which a person can fully meet current and ongoing financial obligations, can feel secure in their financial future and can make choices that allow enjoyment of life". Thus, the contemporary conceptualization of a financially well person emphasizes an individual's capacity to meet not only present demands in life but also most importantly future commitment. It is for this reason Kempson *et al.* (2017) suggest that an individual who is financially well has control over daily expenses, the ability to absorb financial shocks, is capable of meeting future financial commitment and has the freedom to make choices that permit enjoyment of life.

Empirical studies on financial well-being: the African perspective

While the concept of financial well-being has received some significant level of research interest in many parts of the world particularly, in most developed countries, very few studies from the African continent exist to date (Bowman *et al.*, 2017). The few isolated studies from the African perspective examined the influence of some demographic variables on financial well-being, financial well-being's impact on investments, productivity, absenteeism and cost in the manufacturing and business firms (Dickason-Koekemoer and Ferreira, 2019; Van Vuren, 2015; Vuren *et al.*, 2018).

Vuren *et al.* (2018) investigated the impact of personal financial well-being on employee productivity, absenteeism and financial interference in South Africa and concluded that financial well-being has a direct effect on productivity, absenteeism and financial interference. Results of this study demonstrate the existence of a negative and statistically significant relationship between financial well-being, financial interference and absenteeism while financial well-being was found to be positively associated with employees' productivity. Thus, higher level of financial well-being reduces absenteeism and increases the productivity of employees which have important implications on total employee cost to the organization.

Again, Vosloo *et al.* (2014) examined the impact of personal financial well-being on employees' satisfaction with remuneration. Using a large sample size of 9,057 employees from different sectors in South Africa, their study found personal financial well-being to be positively associated with satisfaction with remuneration. The study also established that the relationship between financial well-being and satisfaction with remuneration was ten times stronger for people with higher personal financial efficacy.

Dickason-Koekemoer and Ferreira (2019), on the other hand, examined the differences in the level of financial well-being of some selected South African investors by reference to key demographic characteristics of the respondents. Their results show significant difference between financial well-being of male investors and their female counterpart with the males having higher financial well-being than the females. Again, financial well-being of older investors was found to be significantly lower than that of younger folks.

Rom (2014) also ascertained the effect of unsecured lending on the financial well-being of consumers and concluded that consumers who accessed finance through unsecured lending or multiple unsecured loans have a better subjective view of their financial well-being than their peers. While studies on financial well-being undoubtedly have been low on the continent compared with the rest of the world, the few existing studies have focussed largely on the South African environment. It can therefore be concluded that very little has been done on financial well-being in Africa despite the surge in research interest on the subject matter from a global perspective. The need for new studies on this important concept but arguably neglected by academic researchers in most parts of Africa cannot be overemphasized.

Measures of financial well-being

Financial well-being has been theorized to consist of both the subjective perception and objective indicators of an individual's financial position (Cox *et al.*, 2009; Zemtsov and Osipova, 2016). While the subjective measure evaluates financial well-being based on how satisfied an individual feels about the state of their finances (Brüggen *et al.*, 2017), the objective indicator evaluates the financial well-being based on the saving, debt and income of the individual (Zemtsov and Osipova, 2016). This presupposes that the objective measures provide a more tangible means of comparing general levels of financial well-being based on certain fixed standards such as income and consumption patterns.

The subjective measure on the other hand describes financial well-being based on what it means to different people. The subjective indicator, therefore, evaluates an individual's financial situation referent to that individual's own perception of his/her financial situation. Subjective well-being studies usually employ scales that assess the views, feelings and perceptions regarding an individual's financial status (Kempson *et al.*, 2017; Taft *et al.*, 2013). Existing studies on financial well-being measures generally suggest that the construct financial well-being is inherently subjective (Farrell *et al.*, 2016; Prawitz *et al.*, 2006; Vlaev and Elliott, 2013; Vosloo *et al.*, 2014). Notwithstanding this, most studies have predominantly used the objective indicators in their empirical analysis (Arber *et al.*, 2014; Prawitz *et al.*, 2006).

Measurement of financial well-being: the context of developing countries

Notwithstanding growing research interest on financial well-being, it still remains a concept with conceptual difficulties in measurement. This in part explains why different authors have employed different scales to measure financial well-being. In South Africa, for instance, different measures including the South African Employee Health and Wellness Survey (SAEHWS) (Van Vuren, 2015; Vuren *et al.*, 2018), the Consumer Financial Protection Bureau (2015); (Dickason-Koekemoer and Ferreira, 2019) and the In Charge Financial Distress/Financial Well-being (IFDFW) scale developed by Prawitz *et al.* (2006) have been employed to investigate financial well-being by different researchers. Thus, even in the same environment researchers have conceptualized financial well-being differently.

While there appear to be differences in the conceptualization of financial well-being, a common theme that runs through the varied measures is that the financial well-being as a concept borders on the extent of control an individual has over daily expenses, the capacity to absorb financial shocks and meet future and some degree of freedom to make choices that permit enjoyment of life (Kempson *et al.*, 2017). Thus, a good measure of financial well-being should emphasize not only meeting present needs but also most importantly the resilience of the individual to meet future financial commitment. The emphasis placed on the future resilience dimension is what most recent studies refer to as financial well-being. The work of Brüggen *et al.* (2017) and the Consumer Financial Protection Bureau (2015) to a large extent address the gaps in previous definitions and measurement to encompass an individual's financial freedom and ability to sustain both their present and future desired living standards. They define financial well-being as "a state of being in which a person can fully meet current and ongoing financial obligations, can feel secure in their financial future and can make choices that allow enjoyment of life".

Determinants of financial well-being (cognitive and non-cognitive factors)

Extant literature has grouped the determinants of financial well-being into cognitive and non-cognitive components. According to Fernandes *et al.* (2014), a clear distinction of these two components is critical to the financial well-being discourse. The cognitive aspect includes those factors that relate to the mental process involved in knowing, learning and understanding things. These factors relate to the being and usually involve conscious intellectual activity such as numeracy skills, financial literacy and financial knowledge (Hastings *et al.*, 2013; Jariwala, 2015; Remund, 2010).

The non-cognitive factors on the other hand refer to an individual's self-assessment usually measured by feelings, personal preferences and behaviour personality that relates to self-control (Strömbäck *et al.*, 2017). These factors generally depict an individual's perception of how much they think they know (subjective knowledge), and their confidence and control in financial matters, and may include such factors as FSE and financial attitude (Jariwala, 2015; Strömbäck *et al.*, 2017; Kempson *et al.*, 2017).

Existing studies on financial behaviour have predominantly focussed on the cognitive factors when examining the determinants of financial well-being due to its reflective ability (Remund, 2010). Despite their usefulness in explaining the financial well-being of individuals, studies have argued for the need to also examine the non-cognitive factors (Gutter and Copur, 2011; Joo and Grable, 2004).

Lown (2011) and Strömbäck *et al.* (2017), for instance, posit that exploring the role of non-cognitive factors such as self-control and confidence would be useful in explaining better differences in levels of financial well-being of individuals with similar demographic and economic characteristics. Empirically, Rothwell *et al.* (2016) show that the impact of financial knowledge on financial well-being, for instance, depends on a person's self-confidence/self-control while Mindra and Moya (2017) conclude that merely investigating factors such as financial literacy and financial knowledge is not sufficient to determine an individual's financial well-being. Based on these gaps, this study focusses on the non-cognitive factors by examining the role of FSE on financial behaviour and financial well-being.

Conceptual framework and hypotheses development

The conceptual framework that guides the current study is presented in Figure 1. Relying on the framework proposed by Brüggen *et al.* (2017), the current study investigates the relationships among FSE, financial behaviour, financial well-being and attempts to establish whether an individual's level of financial well-being has any implication on his/her happiness in life. Accordingly, the following conceptual framework is proposed for the study.

The framework predicts that FSE has a positive influence on financial behaviour while financial behaviour and FSE are expected to be positively related to financial well-being. The framework also predicts a positive relationship between financial well-being and happiness while we also expect FSE and financial behaviour to also impact positively on happiness. Lastly, we expect financial well-being to be positively related to happiness.

The relationship between financial self-efficacy and financial behaviour

FSE is a measure of knowledge, confidence and control an individual possesses to successfully manage his/her finances and accomplish financial goals (Farrell *et al.*, 2016; Kempson *et al.*, 2017). Generally, it is a person's perceived capability to control his/her personal finances (Danes and Haberman, 2007; Mindra and Moya, 2017). Central to the definition of FSE is the fact that it measures the confidence and control an individual has over financial matters. It has been argued that FSE is the link between financial knowledge and responsible financial behaviour (Jariwala, 2015; Shim *et al.*, 2009; Dew and Xiao, 2011). By implication, individuals who are financially knowledgeable, confident and can exercise self-control are more likely to practise responsible financial behaviour.

Responsible financial behaviour involves proper money management usually measured in terms of savings, investment, debt management, cash/credit management, retirement planning and insurance (Farrell *et al.*, 2016; Vosloo *et al.*, 2014). While different measurement scales have been employed to measure financial behaviour, this study adopts Financial Management Behaviour Scale (FMBS) developed by Dew and Xiao (2011) as it measures key dimensions of financial behaviour simultaneously. In terms of the relationship between FSE and financial behaviour, Farrell *et al.* (2016) showed that FSE may be a stronger predictor of responsible financial behaviour. Indeed, some existing studies (Jariwala, 2015; Parrotta and Johnson, 1998; Tokunaga, 1993) confirm that the missing link that bridges the gap between an individual's possession of financial knowledge and responsible financial behaviour is FSE. Consequently, this study hypothesizes that:

H1. There is a positive relationship between FSE and financial behaviour.

Financial self-efficacy and financial well-being

Very little is known about the direct relationship between FSE and financial well-being from literature. Thus, it remains an open question whether individuals who are financially knowledgeable, confident and have control over financial matters are more likely to be financially well in life. Notwithstanding this, the few studies (Shim *et al.*, 2009; Tang *et al.*, 2015; Vosloo *et al.*, 2014) that have investigated the relationship between FSE and financial well-being suggest that a positive relationship exists between the two constructs. This means that the capacity of an individual to meet present and future financial obligations and the freedom to make choices that permit the enjoyment in life could be influenced by the level of FSE. Therefore, we hypothesize that:

H2. There is a positive relationship between FSE and financial well-being.

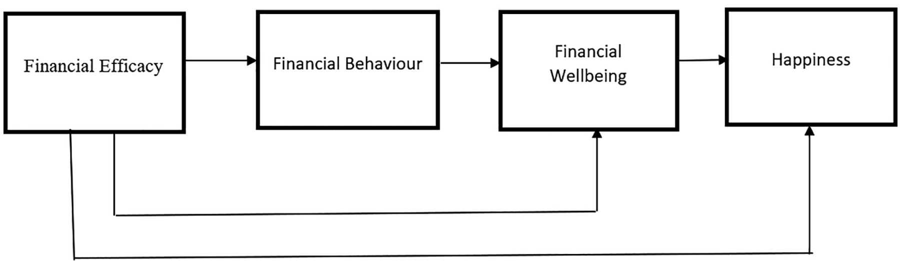

Figure 1. Conceptual framework for the study

Financial behaviour and financial well-being

In recent years, studies on well-being have continuously repeated that "domain specific behaviour contributes to domain-specific satisfaction". This explains why most of these studies on well-being primarily within behavioural finance focus squarely on the relationship between financial behaviour and financial well-being. These previous studies (Gutter and Copur, 2011; Kim and Garman, 2003; Strömbäck *et al.*, 2017) have mostly found this relationship to be positive and significant. Likewise, the argument put out by Strömbäck *et al.* (2017) and Vlaev and Elliott (2013) acknowledges the importance of actively saving, effectively planning and purchasing insurance to manage unforeseen expenses and increase financial well-being. Thus, it is hypothesized that:

H4. There is a positive relationship between financial behaviour and financial well-being.

Financial well-being and happiness

Studies on financial well-being have focussed predominantly on the determinants of financial well-being with little attention on its consequence (Brüggen *et al.*, 2017; Mindra *et al.*, 2017; Răileanu-Szeles, 2014). While a number of outcomes such as life satisfaction and quality of life exist in prior literature as an individual's satisfaction derived from income (Annink *et al.*, 2016; Parrotta and Johnson, 1998), the consequence of financial well-being is yet to be examined in the literature. However, Brüggen *et al.* (2017) argue that financial well-being may be a good predictor of the construct happiness.

Most studies have used happiness and overall well-being interchangeably, others have commonly likened happiness to personal well-being and life satisfaction (Annink *et al.*, 2016; Kempson *et al.*, 2017; Răileanu-Szeles, 2014; Xiao *et al.*, 2009). According to Zemtsov and Osipova (2016), happiness is an emotional quality of an individual's everyday experience. It is the notion that an individual is satisfied with his/her life and feels as though they are progressing towards their goals and life is good (fulfilment of goals). Regarding the link between financial well-being and happiness, the argument is that when individuals can adequately meet their immediate financial needs and are also capable of meeting future financial commitment, such individuals are more likely to be satisfied in life.

Therefore, we hypothesize that:

H5. Financial well-being is positively related to happiness.

Methodology

Research design, data and data collection

By means of a quantitative survey approach this study explores the main predictors of financial well-being and the relationship between an individual's level of financial well-being and happiness in life. Data for the study was gathered by means of self-administered questionnaires to the respondents.

Survey instrument

The key constructs of the study were measured through a survey instrument developed based on scales previously used in existing studies. The Financial Self-Efficacy Scale (FSES) developed by Lown (2011) was used to measure FSE, while financial behaviour was measured using the Financial Management Behaviour Scale developed by Dew and Xiao (2011). The Financial Well-being Scale developed by the Consumer Financial Protection Bureau (CFPB, 2017) was employed to measure financial well-being and happiness was measured using the Satisfaction with Life Scale developed by Diener *et al.* (1985). Each item was measured on a seven-point Likert scale with 1 = strongly disagree and 7 = strongly agree.

Sample selection and questionnaire administration

The respondents for the study were drawn from the 275 members of the parliament in Ghana for the Second Section of Seventh Parliament of the Fourth Republic. The selection of this sample was motivated by two important reasons. First, existing studies on well-being strongly recommend a homogeneous group for proper assessment of well-being of individuals (Kim *et al.*, 2003; Xiao *et al.*, 2009). As Delle Fave *et al.* (2011) point out, well-being is affected by specific circumstances such as economic characteristics and needs associated with an individual's life stages, and hence, a homogeneous group is relevant in dealing with the effect of these factors on estimated results. Second, existing studies argue that before an individual's financial well-being can be assessed, that individual needs to meet a certain threshold in terms of his/her ability to provide beyond and above the basic necessities of life (Hamilton and Darity, 2017).

Thus, research on well-being should target individuals whose level of consumption goes beyond their basic needs. Parliamentarians in Ghana fall within the category of Ghanaians whose average annual consumption expenditure exceeds that which has been classified as the wealthiest (GHS 7,243.70, the equivalent of $1,610) in The Ghana Poverty and Inequality Report (2016) and hence meet the criteria recommended.

To fulfil all the necessary protocols, a preliminary meeting was held with the Parliamentary Head of Research and the Parliamentary Clark to ensure that the questions were appropriate and would not invade the privacy of the parliamentarians. Subsequently, the questionnaire was sent to the Leadership of the House and the Speaker of Parliament for approval. Based on feedback received, the questionnaire was revised, and the final draft presented to the Speaker of Parliament who gave the permission for the administration of the instrument. With the knowledge and assistance of the Speaker of Parliament, the survey instrument was administered to the respondent group at "the Chamber" of Ghana's parliament in the month of March, 2018. Out of the 275 questionnaires administered, 223 were received representing a response rate of 81%. However, a total of 210 useable questionnaires were included in the analysis while the remaining 13 were excluded from the analysis because respondents failed to answer most of the questions.

Profile of respondents

Table 1 provides details of the descriptive statistics of the respondents. Out of the total of 210 parliamentarians that participated in the study, 183 representing 87.13% were male with only 27 females (12.85%). Thus, notwithstanding the fact that women constitute a greater percentage of the population in Ghana (51%) [1], female representation in critical sectors such as the legislature continues to be very low. In terms of age, almost two-thirds of the respondents were aged between 40–49 (43.8%) and 50–59 (25.2%), an indication that most parliamentarians were within their active working age. On the average, more than half of the respondents (55.7%) had at least a master's degree, 22% had obtained a PhD qualification with only a few (4.1%) holding a secondary school certificate which demonstrates that the educational qualification of most parliamentarians is very high. Most of the parliamentarians are religious (91.4%), with 65.7% being Christians, 26.2% being Muslims and the rest belonging to either the African traditional religion or non-believers. Almost 98% of the respondents had dependents ranging from a minimum of one to above ten in some cases. Most of the respondents were not new to the house as close to 67% of them have served more than one term as parliamentarians. This is an indication that majority of the respondents have some considerable amount of experience of the work of parliament.

Descriptive statistics on study constructs

Table 2 presents the means and standard deviations of respondents' assessment of the various indicators used to measure the main constructs of the study. Overall, the construct

Table 1.
Demographic characteristics of respondents

Demographics		Frequency (n = 210)	Percentages (%)
Gender	Female	27	12.85
	Male	183	87.14
Age	Below 30	12	5.7
	30–39	45	21.4
	40–49	92	43.8
	50–59	53	25.2
	60 and above	8	3.8
Educational level	Bachelor's	36	17.1
	Master's	117	55.7
	PhD	47	22.4
	Others	10	4.8
Marital status	Single	28	13.3
	Married	144	68.6
	Separated	21	10
	Divorced	15	7.1
	Widowed	2	1.0
Number of dependents	None	5	2.4
	1–3	54	25.7
	4–6	65	31.0
	7–9	33	15.7
	10 and above	53	25.2
Religious denomination	Yes	192	91.4
	No	18	8.6
Religion	Christianity	138	65.7
	Muslim	55	26.2
	African Traditional Religion	7	3.3
	Atheist	1	0.5
	Other	9	4.3
Number of terms served as parliamentarian	1 term	70	33.3
	2 terms	93	44.3
	3 terms	40	19.1
	4 terms	7	3.3

happiness had the highest ratings by the respondents, an indication that on average, members of parliament are generally happy and satisfied with life (Mean = 4.31, SD = 1.85). Conversely, FSE emerged with the lowest mean score (Mean = 3.54, SD = 1.89) suggesting that members of parliament confidence, control and knowledge in their ability to manage finances are not too high. Additionally, analysis of respondents' views on the construct financial behaviour (Mean = 4.26, SD = 1.95) suggested that on average, members of parliament take positive actions when making financial decisions. All things being equal, the spillover from practising positive behaviour affirms respondent's views on the construct financial well-being (Mean = 3.85, SD = 1.856), which suggests that on the average, respondents are just on track to meet both their present and future financial goals.

Among the six indicators measuring the construct FSE, "It is hard to stick to my spending plan when unexpected expenses arise" had the highest rating (Mean = 3.87, SD = 2.00), whereas "I lack confidence in my ability to manage my finances" was rated the lowest (Mean = 3.14, SD = 1.84). Out of the 15 indicators that measured the construct financial behaviour, "I contribute money to a retirement account" stood out with the highest mean score (Mean = 4.95, SD = 1.85), whilst "I usually pay more than the minimum repayments on my loan" emerged with the lowest mean score (Mean = 3.73, SD = 1.89).

CODE	Constructs	Mean	Std. Dev
Financial self-efficacy (FSE)		*3.54*	*1.89*
FSE1	It is hard to stick to my spending plan when unexpected expenses arise	3.87	2.00
FSE2	It is challenging to make progress towards my financial goals	3.63	1.75
FSE3	When unexpected expenses occur, I usually have to borrow	3.47	1.89
FSE4	When faced with a financial challenge, I have a hard time figuring out a solution	3.45	1.90
FSE5	I lack confidence in my ability to manage my finances	3.14	1.84
Financial behaviour (FB)		*4.26*	*1.95*
FB1	I compare prices in different shops when purchasing a product or service	4.37	2.05
FB2	I pay all my bills (electricity, water, telephone, etc.) on time	4.71	1.97
FB3	I keep a written or electronic record of my monthly expenses	4.04	1.99
FB4	I stay within my budget or spending plan	4.06	1.97
FB5	I pay off overdraft balance in full each month	3.95	1.94
FB6	I usually exceed the maximum withdrawal limit on one or more ATM cards	3.78	1.83
FB7	I usually pay more than the minimum repayments on my loan	3.73	1.89
FB8	I have begun or maintain an emergency savings fund	4.48	1.98
FB9	I save money from every income received	4.42	1.94
FB10	I save for a long-term goal such as purchasing a car, education, home, etc.	4.49	1.93
FB11	I contribute money to a retirement account	4.95	1.85
FB12	I buy bonds, stocks, mutual funds or long-term investments	4.51	1.86
FB13	I maintain or purchase an adequate health insurance policy	3.85	2.20
FB14	I maintain or purchase adequate property insurance such as comprehensive auto or homeowners' insurance	4.20	1.90
FB15	I maintain or purchase adequate life insurance	4.30	2.05
Financial well-being (FW)		*3.85*	*1.86*
FW1	I can handle a major unexpected expense	4.21	2.04
FW2	I am securing my financial future	4.37	1.96
FW3	Because of my money situation, I feel like I will never have the things I want in life	3.12	1.67
FW4	I can enjoy life because of the way I'm managing my money	4.48	1.80
FW5	I am just managing my expenses with my current income	4.37	1.80
FW6	I am concerned that the money I have or will save will not last in the long run	3.57	1.77
FW7	Giving a gift for a wedding, birthday or another occasion would put a strain on my finances for the month	3.30	1.85
FW8	I have money left over at the end of every month	4.17	1.82
FW9	I am unable to pay my bills as and when they fall due	3.09	1.89
FW10	My finances control my life	3.77	1.98
Happiness (SL)		*4.31*	*1.85*
SL1	In most ways, my life is close to my ideal world	4.08	1.96
SL2	The conditions of my life are excellent	4.40	1.70
SL3	I am satisfied with my life	4.59	1.88
SL4	So far, I have gotten the important things I want in life	4.43	1.76
SL5	If I could start life over again, I would change nothing	4.05	1.95

Note(s): FSE represents financial self-efficacy. FB represents financial behaviour. FW represents financial well-being. SL represents happiness. Table 2 represents the means and standard deviations of respondents' assessment of the various indicators among the constructs

Table 2. Descriptive statistics on construct

Under the financial well-being construct measured with ten indicators, "I can enjoy life because of the way I'm managing my money" had the highest mean score (Mean = 4.48, SD = 1.80), whereas "I am unable to pay my bills as and when they fall due" had the lowest mean score (Mean = 3.09, SD = 1.89). Amongst the indicators measuring happiness, "I am satisfied with my life" (Mean = 4.59, SD = 1.88) emerged the highest rated indicator. Whereas "If I could start life over again, I would change nothing" (Mean = 3.07, SD = 2.01) emerged the least rated.

Procedure for data analysis
The hypotheses of the study were tested using the structural equation modelling (SEM) technique. Compared with other estimation techniques, SEM was considered a more appropriate for this study as it has been found to be particularly useful in evaluating complex model relationships simultaneously (Sarstedt *et al.*, 2011; Wong, 2013). The nature of the study's constructs (all variables of interest are latent) and the complex nature of the study's framework (involving multiple dependent constructs) render the strict assumption of multivariate regression impossible or not practical for this study. Prior to the SEM analysis, however, the construct financial behaviour was subjected to an exploratory factor analysis in order to examine its dimensionality. Prior studies have considered financial behaviour as a composite concept that consists of different dimensions (Cox *et al.*, 2009).

Results of EFA

We employed the principal component method of extraction using the Kaiser varimax criterion for the rotation of the matrix in order to obtain the best solution. The test yielded satisfactory results, as the value of Kaiser–Meyer–Olkin (KMO) measure of data adequacy was above the recommended threshold of 0.7 (Kaiser, 1974). Additionally, the Bartlett test of sphericity confirms the presence of correlations between the 15 indicators measuring financial behaviour, and this test yielded statistically significant results. The principal component analysis revealed the presence of four factors explaining a total variance of 63.79% with each recording an eigenvalue greater than 1 as shown in Table 3.

In total, 14 out of 15 indicators loaded well with factor loadings exceeding the minimum threshold of 0.5. The four factors extracted were labelled as *"budget", "debt management", "savings and investment" and "insurance"*, in line with previous studies (Joo and Grable, 2004; Porter and Garman, 1993; Xiao *et al.*, 2009). Using these dimensions of financial behaviour, a framework was developed to test the hypotheses of the study as shown in Figure 2.

SEM analysis technique
The two-step approach of SEM recommended by Hair *et al.* (2014) is adopted in this study. First, we assess the measurement model to test for validity and reliability of the constructs. This is followed by an assessment of the structural model to test for the study hypotheses. This study adopts the partial least square (PLS)-SEM technique to test the structural relationship among the study's constructs. Compared with the covariance-based SEM (CB-SEM), PLS-SEM technique accommodates both formative and reflective constructs, particularly useful when there is no assumption about data distribution (appropriate for both a normal and non-normal data distribution), applications have little available theory and where predictive accuracy is key to the researcher (Wong, 2013).

Reliability and validity tests
The reliability of the constructs was assessed examining both the Cronbach alpha and the composite reliability scores. All constructs demonstrate adequate reliability as the Cronbach alpha and the composite reliability scores for each construct exceeded the recommended threshold of 0.70 (Fornell and Larcker, 1981; Nunnally and Bernstein, 1978). The validity of the constructs was also measured by performing the convergent and discriminant tests. Convergent validity was assessed by the average variance extracted (AVE), which refers to the average variance that a construct and its indicators have in common. The AVE scores as shown in Table 4 demonstrate that all the constructs met the recommended minimum threshold of 0.50 (Hair *et al.*, 2013).

Indicators	Budget	Factors Debt management	Savings and investment	Insurance
I compare prices in different shops when purchasing a product or service	0.653			
I pay all my bills (electricity, water, telephone, etc.) on time	0.727			
I keep a written or electronic record of my monthly expenses	0.786			
I stay within my budget or spending plan	0.722			
I pay off overdraft balance in full each month		0.733		
I usually exceed the maximum withdrawal limit on one or more ATM cards		0.650		
I usually pay more than the minimum repayments on my loan		0.819		
I save money from every income received			0.638	
I save for a long-term goal such as purchasing a car, education, home, etc.			0.654	
I contribute money to a retirement account			0.735	
I buy bonds, bonds, stocks, mutual funds or long-term investment			0.739	
I maintain or purchase an adequate health insurance policy				0.814
I maintain or purchase adequate property insurance such as comprehensive auto or homeowners' insurance				0.752
I maintain or purchase adequate life insurance				0.800
Eigenvalues	5.56	1.83	1.12	1.05
Percentage of variance explained	37.10	12.17	7.49	7.03

Note(s): The table shows the loadings of the indicators as well as the eigenvalues and variance explained for the four components of financial behaviour

Table 3. Results of exploratory factor analysis

Discriminant validity is assured when the square root of AVE is greater than its correlation with any other construct. As shown in Table 5, the square roots of the AVE scores for the constructs given in italics along the diagonals were greater than the cross-correlations of the constructs, an indication that discriminant validity is assured.

Checks for multicollinearity, predictive relevance of model and assessment of coefficient of determination

Having confirmed the reliability and validity of the constructs, the appropriateness of the model was evaluated by checking for the degree of multicollinearity among the constructs (using the variance inflation factor, VIF), the predictive relevance of the model (by performing the blindfolding procedure) and the strength of the coefficient of determination using the R^2. The VIF values for all the indicators of the constructs as shown in the Table A1 suggest the absence of multicollinearity problem, with values ranging from a lower bound of 1.00 and higher bound of 2.962 and hence, fall within the recommended threshold of less than 5 (Hair *et al.*, 2014; Diamantopoulos and Siguaw, 2006).

Test for common method bias

Given the subjective nature of our measurement scale for financial well-being (which gives rise to the possibility of some respondents giving socially desirable answers) and the fact that

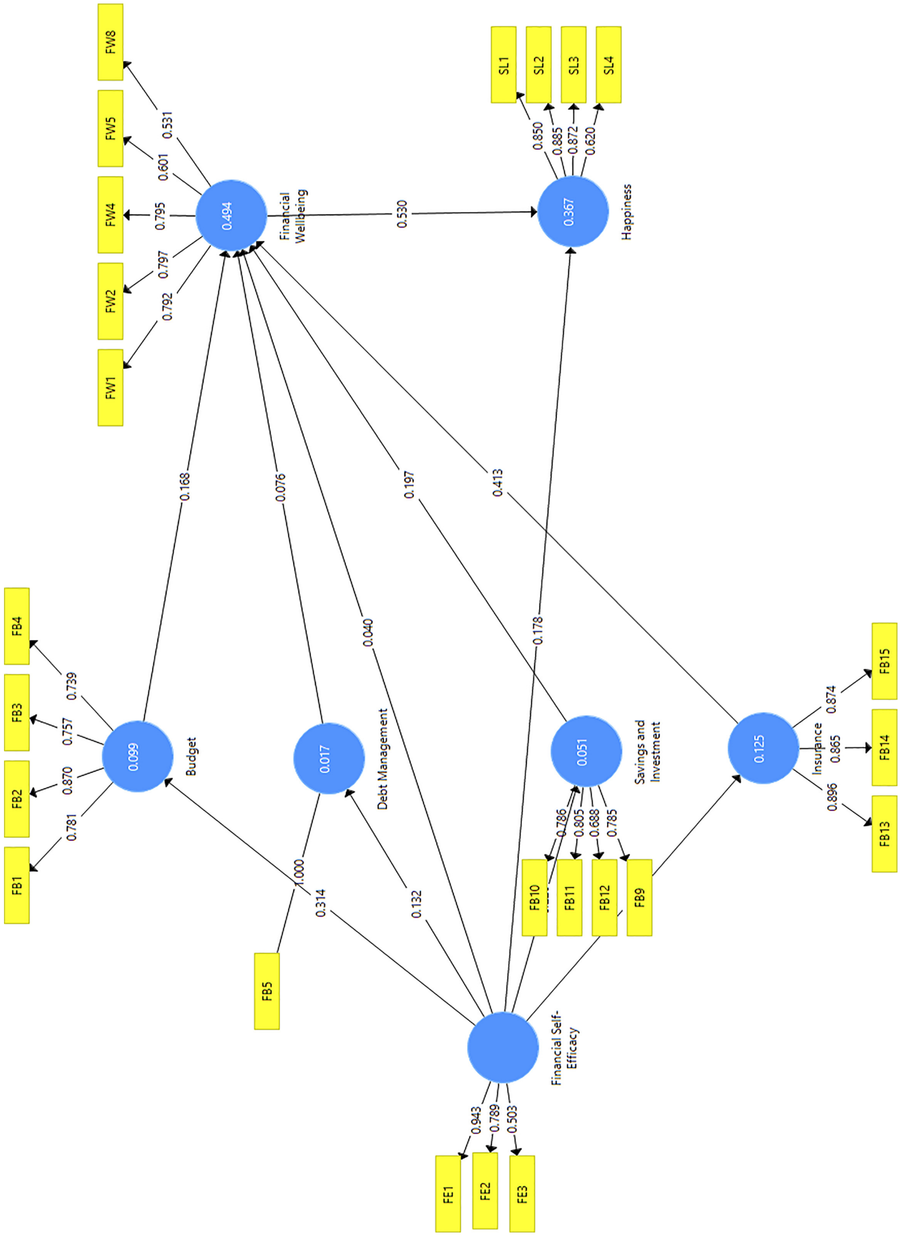

Figure 2.
The structural model

Code	Construct	Factor loadings	Cronbach alpha	Composite reliability	AVE
Financial self-efficacy			*0.712*	*0.802*	*0.588*
FSE1	It is hard to stick to my spending plan when unexpected expenses arise	0.943			
FSE2	It is challenging to make progress towards my financial goals	0.789			
FSE3	When unexpected expenses occur, I usually have to borrow	0.503			
Budget			*0.797*	*0.868*	*0.622*
FB1	I compare prices in different shops when purchasing a product or service	0.781			
FB2	I pay all my bills (electricity, water, telephone, etc.) on time	0.870			
FB3	I keep a written or electronic record of my monthly expenses	0.757			
Debt management			*1.000*	*1.000*	*1.000*
FB5	I pay off overdraft balance in full each month	1.000			
Savings and investment			*0.769*	*0.851*	*0.589*
FB9	I save money from every income received	0.785			
FB10	I save for a long-term goal such as purchasing a car, education, home, etc.	0.786			
FB11	I contribute money to a retirement account	0.805			
FB12	I buy bonds, stocks, mutual funds or long-term investments	0.688			
Insurance			*0.852*	*0.910*	*0.771*
FB13	I maintain or purchase an adequate health insurance policy	0.896			
FB14	I maintain or purchase adequate property insurance such as comprehensive auto or homeowners' insurance	0.865			
FB15	I maintain or purchase adequate life insurance	0.874			
Financial well-being			*0.755*	*0.834*	*0.507*
FW1	I can handle a major unexpected expense	0.792			
FW2	I am securing my financial future	0.797			
FW4	I can enjoy life because of the way I'm managing my money	0.795			
FW5	I am just managing my expenses with my current income	0.601			
FW8	I have money left over at the end of every month	0.531			
Satisfaction with life			*0.822*	*0.885*	*0.663*
SL1	In most ways, my life is close to my ideal world	0.850			
SL2	The conditions of my life are excellent	0.885			
SL3	I am satisfied with my life	0.872			
SL4	So far, I have gotten the important things I want in life	0.620			

Note(s): The table provides the scores of the reliability and validity test conducted on the various constructs. FSE represents financial self-efficacy. FB represents financial behaviour. FW represents financial well-being. SL represents happiness

Table 4. Reliability and validity test

	FBB	FBD	FSE	FW	FBI	SL	FBS
FBB	*0.789*						
FBD	0.266	*1.000*					
FSE	0.314	0.132	*0.767*				
FW	0.526	0.200	0.294	*0.712*			
FBI	0.538	0.126	0.354	0.649	*0.878*		
SL	0.395	0.133	0.333	0.582	0.541	*0.814*	
FBS	0.523	0.113	0.226	0.558	0.619	0.420	*0.768*

Note(s): FBB represents the budget (financial behaviour). FBD represents debt management (financial behaviour). FSE represents financial self-efficacy. FW represents financial well-being. FBI represents insurance (financial behaviour). SL represents happiness. FBS represents savings and investment (financial behaviour)

Table 5.
Fornell–Larcker criterion

data for both endogenous and exogenous variables were collected from the same source, we tested for the existence of common method bias in our model. The Harman one-factor model was employed and the result showed a percentage variance of 23.89% which is less than the tolerable threshold of 50%. This suggests that the measurement model is free from common method bias. Details of this result are shown in Table A2.

Hypotheses testing

We employ the SmartPLS bootstrapping procedure to test for the relationship among the study constructs. In this study we predict that an individual's level of financial well-being is determined by both FSE and financial behaviour and that financial behaviour mediates the relationship between FSE and financial well-being. We also predict that FSE, financial behaviour and financial well-being are good predictors of happiness in life. Table 6 presents a summary of the bootstrapping results of the direct hypothesized paths.

Hypothesis	Path	Standard coefficient	Direct effect (*p*-value)	Remarks
H1a	Financial Self-Efficacy → Budget	0.314	0.000***	Accepted
H1b	Financial Self-Efficacy → Debt Management	0.132	0.062*	Accepted
H1c	Financial Self-Efficacy → Savings and Investment	0.226	0.001***	Accepted
H1d	Financial Self-Efficacy → Insurance	0.354	0.000***	Accepted
H2	Financial Self-Efficacy → Financial Well-being	0.040	0.574	Not Accepted
H3	Financial Self-Efficacy → Happiness	0.178	0.009***	Accepted
H4a	Budget → Financial Well-being	0.168	0.031**	Accepted
H4b	Debt Management → Financial Well-being	0.076	0.197	Not Accepted
H4c	Insurance → Financial Well-being	0.413	0.000***	Accepted
H4d	Savings and Investment → Financial Well-being	0.197	0.002***	Accepted
H5	Financial Well-being → Happiness	0.530	0.000***	Accepted

Note(s): Significance level: ***1%; **5%; *10%. The table shows the path coefficients of the various relationships and *p*-value

Table 6.
Results of direct effect

Discussion of results

The results from Table 6 indicate a positive and highly significant relationship between FSE and the four dimensions of financial behaviour. Specifically, the results demonstrate that a person's level of FSE impacts positively on his savings and investment behaviour (β = 0.226, p-value < 0.01), budget (β = 0.314, p-value < 0.00), insurance (β = 0.354, p-value < 0.000) and debt management (β = 0.132, p-value < 0.062). By implication, individuals possessing high FSE exhibit proper financial behaviour. This finding demonstrates that beyond an individual's financial knowledge that has mostly been associated with proper financial behaviour (McCannon *et al.*, 2016; Parrotta and Johnson, 1998), the confidence and the ability to control oneself (e.g. ability to control anxiety regarding one's financial situation) are also relevant for proper financial behaviour. As Strömbäck *et al.* (2017), for instance, argue that people with good self-control are more likely to exhibit proper financial behaviour and generally feel less anxious about financial matters.

The results also indicate that a good financial behaviour matters for a person's financial well-being. All the dimensions of financial behaviour had a positive and statistically significant relationship with financial well-being. This means that individuals with a positive disposition towards budgeting, good savings and investment culture, proper insurance and debt management behaviour are better placed to meet current financial obligations, feel secured about their future finances and can make choices that allow enjoyment of life. Empirically, this finding is consistent with other studies (Farrell *et al.*, 2016; Joo and Grable, 2004; Xiao *et al.*, 2009) that conclude that proper financial behaviour impacts positively on financial well-being.

Test of the relationship between FSE and financial well-being yielded a positive but insignificant result (β = 0.040, p-value < 0.574). Thus, contrary to our expectations, the result suggests that an individual's "sense" of FSE, although positively related, does not affect his/her financial well-being in a significant manner. This means an individual's level of financial well-being will not increase based on his/her perceived knowledge, confidence and overall control of money. This finding contradicts some existing studies (Strömbäck *et al.*, 2017; Vlaev and Elliott, 2013; Vosloo *et al.*, 2014) that conclude that FSE is an important determinant of financial well-being. The finding, however, provides empirical support to the assertion by Brüggen *et al.* (2017) that higher levels of FSE are not sufficient to significantly impact on financial well-being.

The results, however, show a positive and highly significant relationship between FSE and happiness (β = 0.178, p-value < 0.009). This is an indication that an individual's state of self-assuredness of fulfilment in life may be influenced by the confidence, control and knowledge they possess in financial matters. This finding is supported by some related studies (Vlaev and Elliott, 2013; Xiao *et al.*, 2009; Zaker *et al.*, 2016) that regard the control an individual has especially in finances as a stronger predictor of life satisfaction.

Lastly, result of the relationship between financial well-being and happiness revealed a positive and a highly significant association between the two constructs (β = 0.530, p-value < 0.000). Thus, in line with our expectation, we find a person's level of financial well-being to have a positive effect on his/her self-assuredness and fulfilment in life. By implication, individuals with the capacity to provide for their needs and who do not also feel worried financially to cater for future needs usually have a sense of happiness in life. As Xiao *et al.* (2009) pointed out, people who perceive less financial difficulty now and in the future are more likely to be happy and free from worries.

Mediation effect assessment

In this study we hypothesized that financial behaviour mediates the relationship between FSE and financial well-being, whilst financial well-being mediates the relationship between financial behaviour and happiness. We followed the guidelines recommended by Hair *et al.* (2014) to test for the mediation effect and results are as shown in Table 7. Consistent with our predictions we find financial behaviour to mediate the relationship between FSE and financial well-being. This result demonstrates that FSE can only influence financial well-being when translated to proper financial behaviour. Thus, a person's perceived ability to control his/her finances does not automatically contribute to his/her ability to sustain current and future living standards unless accompanied with good financial behaviour. To be financially well in life would therefore require performance of an action in a form of responsible financial behaviour even when an individual possesses higher level of FSE. Again, we find financial well-being to mediate the relationship between financial behaviour and happiness as well as FSE and happiness.

Implications of the study

The current study contributes to research on determinants and consequences of financial well-being in multiple ways. While previous studies on financial well-being focus on the objective measure of financial well-being (which has been criticized for being too narrow in measuring an individual's financial condition), this study employs the subjective measure of well-being. Employing the subjective measure of well-being does not only address the inherent limitations of the objective approach but also provides a rich understanding and insight into the financial condition of individuals from their own perspective.

Again, this study focusses on examining some outcomes of financial well-being which is virtually non-existent in the literature. Existing studies (Gutter and Copur, 2011; Strömbäck *et al.*, 2017; Zurlo, 2009) have mainly discussed the determinants of financial well-being without considering the consequences thereof. We present a framework to understand financial well-being in a more comprehensive manner by investigating the construct "happiness" as an outcome of financial well-being. Thus, this study is one of the first to integrate both the antecedents and outcomes of financial well-being within a single framework.

The results of the structural model show that responsible financial behaviour is a key predictor of financial well-being. Also, FSE impacts positively on responsible financial behaviour; the impact of FSE on financial well-being, however, is dependent on responsible financial behaviour. The results also establish that being financially well has important implications on a person's happiness. The results of our analysis suggest that individuals could enhance their overall well-being by practising responsible financial behaviour including proper savings and investment and debt management strategies. Given that proper financial behaviour affects financial well-being positively and the fact that financial well-

Hypothesis	Path	Standard coefficient	Direct effect (p-value)	Results
H6	Financial Self-Efficacy → Financial Well-being	0.253	0.000***	Accepted
H7a	Budget → Happiness	0.089	0.031***	Accepted
H7b	Debt Management → Happiness	0.040	0.213	Not accepted
H7c	Savings and Investment → Happiness	0.104	0.008***	Accepted
H7d	Insurance → Happiness	0.219	0.000***	Accepted
H8	Financial Self-Efficacy → Happiness	0.155	0.000***	Accepted

Note(s): Significance level: ***1%; **5%; *10%. The table shows the path coefficients of the various relationships and p-value

Table 7.
Mediation results

being is central to the overall well-being of an individual (Zemtsov and Osipova, 2016), an important way of improving the living standards of people in a country is to educate them on the need to live responsible financial lives. Such educational campaigns should also focus on improving the FSE of individuals as it has huge implications on their financial behaviour. Living a responsible financial life as the results point out does not only improve an individual's financial well-being but also promotes a feeling of satisfaction and a sense of fulfilment in life (happiness in life).

Limitations and directions for future research

Findings of this study are limited in some ways which are common with studies that utilize cross-sectional data and self-reported responses. Typical of self-reported responses is the likelihood of receiving socially desirable answers from respondents. To minimize such expected biases, the study adopted generally accepted procedures including the adoption of credible scales used in prior studies, guaranteeing confidentiality of responses, and no attempt was made to collect any information that could identify respondents. Again, while several factors may be responsible for the financial well-being of individuals, this study only considered the impact of FSE and financial behaviour on financial well-being. Also, while we argue that financial well-being contributes to overall happiness, this study did not control for other known determinants of happiness beyond the financial variables. Lastly, even though the relationships among the constructs were tested, causal relationships cannot be inferred from the findings. These limitations offer good grounds for future research.

Note

1. According to the 2010 population census.

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Appendix

Construct name	Code	VIF
Financial self-efficacy (FSE)	FSE1	1.456
	FSE2	1.685
	FSE3	1.303
Financial behaviour (FB)	FB1	1.559
	FB10	1.529
	FB11	1.539
	FB12	1.413
	FB13	2.322
	FB14	1.852
	FB15	2.273
	FB2	2.028
	FB3	1.636
	FB4	1.506
	FB5	1.000
	FB9	1.560
Financial well-being (FW)	FW1	1.574
	FW2	1.801
	FW4	1.743
	FW5	1.373
	FW8	1.217
Happiness (SL)	SL1	2.314
	SL2	2.962
	SL3	2.385
	SL4	1.219

Table A1. VIF values

Factor	Total	% of variance	Cumulative %	Total	% of variance	Cumulative %
	Total variance explained					
	Initial eigenvalues			Extraction sums of squared loadings		
1	10.152	25.381	25.381	9.559	23.897	23.897
2	3.432	8.580	33.961			
3	2.218	5.546	39.506			
4	1.940	4.850	44.356			
5	1.703	4.257	48.614			
6	1.507	3.767	52.380			
7	1.398	3.494	55.875			
8	1.243	3.108	58.983			
9	1.153	2.882	61.864			
10	1.088	2.719	64.583			
11	0.985	2.461	67.045			
12	0.935	2.337	69.381			
13	0.881	2.202	71.583			
14	0.854	2.134	73.718			
15	0.831	2.077	75.794			
16	0.730	1.826	77.621			
17	0.703	1.757	79.378			
18	0.673	1.681	81.059			
19	0.614	1.535	82.594			
20	0.571	1.427	84.021			
21	0.535	1.337	85.358			
22	0.515	1.286	86.644			
23	0.475	1.186	87.831			
24	0.466	1.164	88.995			
25	0.431	1.078	90.073			
26	0.407	1.017	91.090			
27	0.384	0.961	92.051			
28	0.361	0.903	92.954			
29	0.337	0.844	93.797			
30	0.329	0.824	94.621			
31	0.303	0.757	95.378			
32	0.268	0.670	96.047			
33	0.254	0.635	96.682			
34	0.231	0.579	97.261			
35	0.226	0.564	97.825			
36	0.205	0.514	98.339			
37	0.192	0.480	98.819			
38	0.172	0.430	99.249			
39	0.159	0.396	99.645			
40	0.142	0.355	100.000			

Note(s): Extraction method: Principal axis factoring

Table A2.
Common method bias results

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